



National Transportation Safety Board Aviation Accident Final Report

Location:	MIAMI, FL	Accident Number:	MIA92FA115
Date & Time:	04/25/1992, 1815 EDT	Registration:	HK360
Aircraft:	BOEING 707-324C	Aircraft Damage:	Substantial
Defining Event:		Injuries:	3 None
Flight Conducted Under:	Part 129: Foreign		

Analysis

SHORTLY AFTER TAKEOFF, THE #3 ENGINE AND PYLON SEPARATED FROM THE AIRPLANE AS A RESULT OF THE FAILURE OF THE PYLON INBOARD MIDSPAR SUPPORT FITTING. THE FITTING HAD CRACKED DUE TO FATIGUE, AND HAD BEEN CRACKED FOR SOME TIME. THE POINT OF CRACKING WAS NOT VISIBLE FOR INSPECTION ON THE WING. THE FITTING IS THE SUBJECT OF FAA AIRWORTHINESS DIRECTIVE 88-24-10 AND BOEING SERVICE BULLETIN 3183 WHICH REQUIRE VISUAL INSPECTION OF THE MIDSPAR FITTING EACH 1500 FLIGHT HOURS OR 600 CYCLES. THIS INSPECTION HAD BEEN COMPLETED ON THE FAILED FITTING ON JANUARY 2, 1992, 821 FLIGHT HOURS AND 328 CYCLES BEFORE THE FAILURE.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: FAILURE OF THE #3 ENGINE PYLON INBOARD MIDSPAR SUPPORT FITTING DUE TO FATIGUE CRACKING WHICH RESULTED IN THE SEPARATION OF THE NUMBER THREE ENGINE AND PYLON. CONTRIBUTING TO THE ACCIDENT WAS THE INADEQUATE INSPECTION REQUIREMENTS OF THE MANUFACTURER AND THE FAA TO DETECT CRACKS IN THE MIDSPAR FITTING.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION

Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (C) NACELLE/PYLON,FITTING - FATIGUE
2. (C) ACFT/EQUIP,INADEQUATE STANDARD/REQUIREMENT - MANUFACTURER
3. (C) ACFT/EQUIP,INADEQUATE STANDARD/REQUIREMENT - FAA(OTHER/ORGANIZATION)
4. NACELLE/PYLON - SEPARATION
5. ENGINE ASSEMBLY - SEPARATION

Factual Information

Pilot Information

Certificate:	Airline Transport	Age:	36, Male
Airplane Rating(s):	Multi-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	02/27/1992
Occupational Pilot:	Last Flight Review or Equivalent:		
Flight Time:	8000 hours (Total, all aircraft), 4500 hours (Total, this make and model), 2500 hours (Pilot In Command, all aircraft), 200 hours (Last 90 days, all aircraft), 70 hours (Last 30 days, all aircraft), 7 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BOEING	Registration:	HK360
Model/Series:	707-324C 707-324C	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Transport	Serial Number:	19352
Landing Gear Type:	Retractable - Tricycle	Seats:	9
Date/Type of Last Inspection:	01/10/1992, AAIP	Certified Max Gross Wt.:	322300 lbs
Time Since Last Inspection:	821 Hours	Engines:	4 Turbo Fan
Airframe Total Time:	53257 Hours	Engine Manufacturer:	P&W
ELT:	Installed, not activated	Engine Model/Series:	JT3D-3B
Registered Owner:	EXPORT AIR LEASING, INC.	Rated Power:	17000 lbs
Operator:	TRANS AEREOS MERCAN PAN AM	Operating Certificate(s) Held:	
Operator Does Business As:	TAMPA AIRLINES	Operator Designator Code:	TAMF

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	MIA, 11 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	1822 EDT	Direction from Accident Site:	360°
Lowest Cloud Condition:	Scattered / 4000 ft agl	Visibility	7 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	160°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	28° C / 21° C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	IFR
Destination:	CALI, COLOMBIA, OF (SKLC)	Type of Clearance:	IFR
Departure Time:	1815 EDT	Type of Airspace:	Class E

Airport Information

Airport:	MIAMI INTERNATIONAL (MIA)	Runway Surface Type:	Asphalt
Airport Elevation:	11 ft	Runway Surface Condition:	Dry
Runway Used:	9R	IFR Approach:	None
Runway Length/Width:	13002 ft / 150 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	3 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	JEFFREY L KENNEDY	Report Date:	12/16/1993
Additional Participating Persons:	ELMER HUIZINGA; SEATTLE, WA RAYMOND MONKS; SEATTLE, WA BRIAN A HOWE; SEATTLE, WA MICHAEL MENDEZ; MIAMI, FL		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinquiry@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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